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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,905	03/29/2001	Matsuho Miyasaka	205275US2PCT	6974

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
STEVENS, THOMAS H	

ART UNIT	PAPER NUMBER
2123	

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/787,905	MIYASAKA ET AL.	
	Examiner	Art Unit	
	Thomas H. Stevens	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 10/279191.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-4 were examined.

Drawings

2. Figure 1 discloses a Cartesian plane with boundary conditions of a circular object wit figure 3 disclosing a standard seawater pump. Both should be labeled as prior art.

Double Patenting

3. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claim Rejections - 35 USC § 101

4. Claims 1and 2 rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 1 and 2 of prior U.S. Patent No. 6,258,252 (2001). Claims 1 and 2 of the

application (09/787905) disclose a method of using binary element analysis (BEM) to negate corrosion and corrosion prevention of two, three and axial dimensions by splitting the these objects into two parts; while claims 1 and 2 of the issued patent 6,258,252 teach the same process but is grammatically different in teaching the process of determining the potential distributions of the attentional and non-attentional regions (column 10, lines 55-62), whereas the application state the process on pgs .23-24, lines 22-28 and 1-16, respectively. Furthermore, disclosure of dimensions in claim 1 of the application (pg.23, lines 1-14) matches with claim 2 (column 11, lines 8-11). One of ordinary skill in the art at the time of invention would deduce that both documents present the same material. This is statutory double patenting.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Regarding claim 1, the phrase "characterized " renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

8. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

9. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyasaka et al., (U.S. Patent 6,258,252 (1998)). Miyasaka et al. teaches an object to be analyzed for corrosion and corrosion prevention is divided into a plurality of adjacent regions of plural types by a dividing plane with one of the adjacent regions being referred to as an attentional region with a boundary as the dividing plane and the other as a non-attentional region with a boundary as the dividing plane (abstract).

Claim 1. A method of analyzing corrosion and corrosion prevention a system where two or more same or different regions of six regions that are modeled as two-dimensional objects (open and closed regions) three-dimensional objects (open and closed regions), and axially symmetric objects (open and closed regions) are present continuously (columns 9 and 10, lines 66-67 and 1-5), characterized by: dividing the system into regions and dividing each of the regions into elements depending on respective models (two-dimensional, three-dimensional, and axially symmetric) thereof, and using one of the regions as an attentional region and another as a non-attentional region (column 10, lines 40-67); giving varying values of current density a potential to the elements where current densities and potentials on the elements which are positionally the same as each other on a division plane disposed between and shared by two regions are equivalent to each other, the relationship between the current densities and potentials on the elements being unknown(column 10, lines 40-67); solving a discrete boundary integral equation corresponding to the non-attentional region for the given values of the current density or the potential thereby to express the unknown relationship between the current densities and potentials on the division plane with the known relationship between current densities and potentials on elements in the non-attentional region other than the division plane (column 2, lines 54-67 and column 3 lines 1-20; performing a boundary element analysis on the attentional region using the determined relationship between the current densities and potentials on the division plane as a boundary condition on the division plane thereby determine potential and current density distributions in the

attentional region in its entirety (column 3, lines 25-60); and performing a boundary element analysis on the non-attentional region again using the determined potentials or current densities on the division plane thereby to analyze the regions in a related manner (column 10, lines 55-67).

Claim 2. A method of analyzing corrosion and corrosion prevention in a system, where two or more non-attentional regions are present continuously with respect to one said attentional region (column 7, lines 10-33), characterized by: determining the relationship between current densities and potentials with respect to both division planes in the method according to claim 1, analyzing the attentional region using the determined relationship as a boundary condition to determine potential and current density distributions the attentional region in its entirety, and performing a boundary element analysis on the non-attentional region again using the determined potentials or current densities on the division planes thereby to analyze the regions in a related manner (column 7, lines 22-33).

Claim 3. A method analyzing corrosion and corrosion prevention of a pump according to claim 2 (column 7, lines 10-33), characterized in that said attentional region comprises a closed region three-dimensional shape in a guide casing a pump, and the non-attentional regions comprise an axially symmetric closed region a column pipe on an inner surface of the pump

which is contiguous to said guide casing, and an axially symmetric open region of an outer surface of the pump (column 5, lines 33-51).

Claim 4. A method of analyzing corrosion and corrosion prevention of a pump according to claim 3(column 5, lines 33-51), characterized in that anodes are disposed in some or all of the regions of the pumps and a corrosion prevention effect of the anodes is evaluated (column 5, lines 53-63).

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Tom Stevens whose telephone number is (703) 305-0365, Monday-Friday (8:00 am- 4:30 pm) or contact Supervisor Mr. Kevin Teska at (703) 305-9704. The fax number for the group is 703-872-9306.

Any inquires of general nature or relating to the status of this application should be directed to the Group receptionist whose phone number is (703) 305-3900.

August 5, 2004

THS

KEVIN J. TESKA
SUPERVISORY
PATENT EXAMINER